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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of:

Kenneth A. Parulski, et al

**AN ELECTRONIC STILL CAMERA FOR
CAPTURING AND CATEGORIZING
IMAGES**

Serial No. US 09/313,535

Filed 13 May 1999

Commissioner for Patents
Washington, D.C. 20231

Sir:

Group Art Unit: 2612

Examiner: Aung S. Moe

I hereby certify that this correspondence is being deposited today with the United States Postal Service as first class mail in an envelope addressed to Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22343-1450

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January 5, 2004
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TRANSMITTAL OF APPEAL BRIEF

Submitted herewith is the following document relating to the above-identified patent application:

(1) Revised Appeal Brief in triplicate (original and two copies) per Examiner's request in Notification of Non-Compliance dated December 3, 2003.

The Commissioner is hereby authorized to charge any fees associated with this communication or credit any overpayment to ***Eastman Kodak Company Deposit Account No. 05-0225.***

Respectfully submitted,

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Docket 73251/PRC
Customer No. 01333

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

Kenneth A. Parulski, et al

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REVISED APPEAL BRIEF PURSUANT TO 37 C.F.R. 1.192



Table Of Contents

<u>Table Of Contents</u>	i
<u>Real Party In Interest</u>	1
<u>Related Appeals And Interferences</u>	1
<u>Status Of The Claims</u>	1
<u>Status Of Amendments</u>	1
<u>Summary Of The Invention</u>	2
<u>Issues For Review By The Board</u>	2
<u>Grouping Of Claims</u>	3
<u>Arguments</u>	3
<u>Summary</u>	7
<u>Conclusion</u>	7
<u>Appendix I - Claims on Appeal</u>	8

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APPELLANT'S BRIEF ON APPEAL

Appellants hereby appeal to the Board of Patent Appeals and Interferences from the Examiner's Final Rejection of claims 1-15, 26-31, 33 and 35-38 of the above-identified application which was contained in the Office Action mailed August 24, 2001.

A timely Notice of Appeal was filed November 26, 2001.

Real Party In Interest

As indicated above in the caption of the Brief, the Eastman Kodak Company is the real party in interest.

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Related Appeals And Interferences

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No appeals or interferences are known which will directly affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

Status Of The Claims

Claims 1-15, 26-31, 33 and 35-38 are pending in the present application. Claims 16-25, 32 and 34 have been canceled. Claims 1-15, 26-31, 33 and 35-38 stand finally rejected under 35 U.S.C. §103(a). Claims 1-15, 26-31, 33 and 35-38 are appealed. Appendix I provides a clean, double spaced copy of the claims on appeal.

Status Of Amendments

An amendment after final rejection under 37 C.F.R. §1.116 was filed by Applicants on November 26, 2001, amending dependent claims 26 and 27. The Examiner has indicated in an Advisory Action dated December 21, 2001 that this amendment will be entered upon the submission of the present Appeal Brief with the requisite fee, and that the amendment is sufficient to overcome the rejection of claims 26 and 27 under 35 U.S.C. §112 as made in the final Office Action dated August 24, 2001.

Summary Of The Invention

The present invention is directed to an electronic camera which captures images representing a variety of subjects and categorizes the images according to subject matter. In accordance with the invention, the electronic camera utilizes a particular tag name file configuration and associated processing operations that facilitate the transfer of multiple images in a given category between the camera and an external computer.

With reference initially to FIG. 2 of the drawings, the electronic camera includes an image sensor 12 which captures the images, an analog-to-digital (A/D) converter 16 which converts analog image signals into digital image data, and an image buffer 18 which stores the digital image data. A memory such as firmware memory 32a stores two or more tag names providing classification of the images (Specification, page 5, lines 41-51). A user can select particular tag names to be associated with captured images using control means such as toggle switch 54 and select button 56 of FIG. 3, as indicated in step 61 of FIG. 4 (Specification, page 6, lines 44-61). Each selected tag name provides classification of two or more captured images. After selecting a particular tag name, a user takes a picture by depressing the shutter button, as indicated in step 62 of FIG. 4, and the digital image data is stored in a file, as indicated generally in step 63 of FIG. 4 (Specification, page 6, lines 61-65). More specifically, image files are stored in a removable memory 24 that includes multiple tag name files, with each tag name file storing two or more image files (Specification, page 6, lines 63-64). In response to a single request initiated by a computer, e.g., host computer 4 of FIG. 1, all of the images files stored in a specified tag name file of the removable memory 24 are transferred to the computer.

Issues For Review By The Board

The following issues are presented for review by the Board of Patent Appeals and Interferences:

1. Whether claims 1-7, 9, 10, 12, 13, 15, 28-31, 33 and 35-38 are properly rejected under 35 U.S.C. §103(a) as being unpatentable over Yamada et al.

(Japanese Patent Application No. Hei 5-344460) in view of Sarbadhikari et al. (U.S. Patent No. 5,477,264).

2. Whether claims 8, 11, 14, 26 and 27 are properly rejected under 35 U.S.C. §103(a) over Yamada et al. and Sarbadhikari et al. in further view of Yoshida (U.S. Patent No. 5,515,101).

Grouping Of Claims

The claims in the above-noted groups of claims stand or fall together. More particularly, claims 1-15, 26-31 and 35-38 stand or fall together.

Arguments

Issue 1

With regard to Issue 1 above, Applicants note that each of independent claims 1, 29 and 30 calls for assigning selected tag names to captured images in an electronic camera. More particularly, the claims specify that each tag name provides classification of two or more captured images. In addition, image files corresponding to the captured images are stored in tag name files corresponding to the selected tag names. The claims require that there are two or more tag name files and that each tag name file stores two or more image files. As indicated previously, this particular tag name file configuration and its associated processing operations as set forth in claims 1, 29 and 30 facilitate the transfer of multiple images in a given category between the camera and an external computer.

The Examiner in formulating the §103(a) rejection argues that the Yamada et al. reference discloses the above-noted limitations of claims 1, 29 and 30. Applicants respectfully disagree. The Yamada et al. reference teaches to use classification codes to identify images recorded on a floppy disk 14. As indicated in FIG. 2 of Yamada et al., the classification codes are recorded in a “queue track” portion 14a of the floppy disk 14, and images are recorded on tracks in portion 14b of the floppy disk 14. Yamada et al. state that “[a] classification code according to this embodiment is additionally written into this queue track every time a picture (image) is recorded on an empty track” (Yamada et al., Section

0006). The classification codes and corresponding images in Yamada et al. are therefore not stored using a tag name file configuration in the manner set forth in claims 1, 29 and 30.

The Yamada et al. reference further teaches that a separate classification code is generally used for each image recorded on the floppy disk 14. For example, Yamada et al. illustrate in conjunction with FIG. 6 an example of a "track map" which shows correspondence between tracks of the portion 14b of the floppy disk 14 and classification codes recorded in portion 14a of the floppy disk 14. It can be seen that each of tracks 1 through 9 in FIG. 6 has a designated classification code. Apparently, Yamada et al. contemplate storage of a single image per track, with any associated classification code being stored in the queue track portion 14a. However, it appears that there are not two or more image files associated with each classification code, as would be required in accordance with the above-noted limitations of claims 1, 29 and 30. The Yamada et al. reference also makes it clear that the images stored in portion 14b of floppy disk 14 are not combined with their corresponding classification codes into a tag name file having multiple images associated therewith, in accordance with the above-noted limitations of claims 1, 29 and 30. For example, Yamada et al. state that in the case of a newly-entered classification code, such a code is recorded on an area of the queue track corresponding to the relevant picture (Yamada et al., Section 0014).

The hierarchically-classified classification codes of FIG. 13 of Yamada et al. similarly fail to meet the above-noted limitations of claims 1, 29 and 30. More particularly, Yamada et al. teach that multiple levels of classification may be associated with each image (Yamada et al., Section 0020). However, there is no combination of multiple image files into a tag name file as claimed. Instead, each image has a large classification code, a medium classification code and a small classification code associated therewith, as is apparent from FIG. 13. Multiple image files are not combined into common tag name files as in the present invention. Instead, each image has its own separately-stored classification code or codes associated therewith.

The Examiner in the above-noted Advisory Action dated December 21, 2001 recites Section 0004, lines 16-18 of Yamada et al. as teaching the limitation regarding a given tag name providing classification of two or more captured images. Applicants respectfully disagree. It is believed that the Examiner is taking lines 16-18 out of context. For example, lines 8-11 of Section 0004 call for "a classification code recording area provided in a recording medium, for recording thereon the classification code saved in the temporary recording unit in correspondence with a photographed image." This tends to suggest that each recorded image has an associated classification code, and that multiple images are not arranged in tag name files as claimed.

Also in the above-noted Advisory Action, the Examiner relies on FIG. 13 of Yamada et al. as teaching the limitation relating to storage of multiple image files into tag name files with each tag name file storing two or more image files. More particularly, the Examiner argues that the large classification codes in FIG. 13 of Yamada et al. read on the claimed tag name, and that Yamada et al. therefore discloses the claimed tag name file configuration. Applicants respectfully disagree. The claim limitation at issue relates to the tag name file configuration, and not the tag name *per se*. The claims require the generation of a separate tag name file for each selected tag name, and the storage of multiple image files in a given tag name file. The Yamada et al. reference does not form tag name files in this manner. For example, there is no indication in Yamada et al. that a given image file associated with the large classification code of FIG. 13 is stored into a separate tag name file corresponding to the selected tag name, as would be required by the claims. Instead, as indicated previously, the Yamada et al. reference stores the image files separately from the corresponding classification codes, with the image files in portion 14b of the floppy disk 14 and the classification codes in portion 14a. There is no generation of a separate tag name file with storage of multiple image files into a given tag name file as claimed.

The Sarbadhikari et al. reference fails to supplement the above-described deficiencies of Yamada et al. For example, the Examiner argues that Sarbadhikari et al. in column 11, lines 22-26 thereof teaches image transfer from a

camera to a computer. However, even assuming for purposes of argument that this characterization is correct, the claims at issue call for a particular tag name file configuration and associated processing operations that are not disclosed in Sarbadhikari et al. More particularly, as indicated above, the claims specify that each tag name provides classification of two or more captured images, that image files corresponding to the captured images are stored in tag name files corresponding to the selected tag names, that there are two or more tag name files, and that each tag name file stores two or more image files. These limitations are not present in Sarbadhikari et al.

It is well settled that, in order to establish obviousness, the cited references must teach or suggest all of the claim limitations. As indicated previously, none of the references cited in the final Office Action teach the above-noted limitations of claims 1, 29 and 30 relating to the tag name file configuration and its associated processing operations. It is therefore submitted that these independent claims are not obvious in view of the combined teachings of Yamada et al. and Sarbadhikari et al.

Dependent claims 2-7, 9, 10, 12, 13, 15, 28, 30, 31, 33 and 35-38 are believed allowable for at least the reasons identified above with regard to their corresponding independent claims.

Issue 2

With regard to Issue 2, Applicants hereby re-allege and incorporate by reference the arguments above relating to independent claims 1, 29 and 30. Dependent claims 8, 11, 14, 26 and 27 each depend indirectly from claim 1, and are allowable for at least the reasons identified above. More particularly, the Yoshida reference fails to supplement the above-described deficiencies of the combined teachings of the Yamada et al. and Sarbadhikari et al. references with regard to the tag name file configuration and its associated processing operations.

Applicants therefore respectfully submit that the combined teachings of Yamada et al., Sarbadhikari et al., and Yoshida fail to render obvious the present invention as set forth in dependent claims 8, 11, 14, 26 and 27.

Summary

In view of the foregoing, Applicants believe that claims 1-15, 26-31, 33 and 35-38 are in condition for allowance.

Conclusion

For the above reasons, Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the rejection by the Examiner and mandate the allowance of Claims .

Respectfully submitted,



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Enclosures

Appendix I - Claims on Appeal

1. An electronic camera for capturing images representing a variety of subjects and for providing captured images to an external computer in response to a single computer initiated request, wherein the electronic camera is interconnected to the external computer via a cable interface, said camera comprising:

an image sensor for capturing the images;
a converter stage for converting the images into digital image data;
a memory for storing [a plurality of categories] two or more tag names providing classification of the images [by subject];

control means for selecting one of the stored tag names for each of the images;

a processor [having the capability of] for assigning the [plurality of categories] selected tag names to each of the images captured by the image sensor, wherein each [category] tag name [providing subject] provides classification of [one] two or more captured images; [and]

[control means for selecting one or more categories for the images; and]

means for generating [an output image signal comprising] an image file including [both] the digital image data corresponding to the captured images and [separate category data including the one or more categories selected by the user control, wherein the category data is separately accessible for each image apart from the image data] a separate tag name file for each selected tag name;

a removable memory for storing each of the image files into the tag name file corresponding to the selected tag name, wherein the removable memory stores two or more tag name files with each tag name file storing two or more image files; and

means responsive to the single computer initiated request for identifying a particular tag name for transferring all of the image files stored in the corresponding tag name file to the external computer via the cable interface.

2. An electronic camera as claimed in claim 1 wherein the memory is firmware and the [categories] tag names are default categories stored in the firmware.

3. An electronic camera as claimed in claim 2 wherein the [user] control means includes a status display for showing the default categories and the [user] control means selects a particular one of the default categories from those displayed on the status display.

4. An electronic camera as claimed in claim 3 wherein the [user controls] control means includes a first control interface for cycling through the default categories one-by-one and displaying each category individually, and a second control interface for selecting a displayed category.

5. An electronic camera as claimed in claim 1 wherein the [one or more categories] tag names included in the output image data is associated with the digital image data in a distinct file location.

6. An electronic camera as claimed in claim 1 wherein the [one or more categories] tag names included in the output image data is overlaid into the image data.

7. An electronic camera as claimed in claim 1 wherein the camera further comprises a signal port for receiving externally generated user customized tag names [categories], and wherein the processor also stores the externally generated user customized tag names [categories] in the memory and the [user] control means is further capable of selecting a particular one of the externally generated user customized tag names [categories].

8. An electronic camera as claimed in claim 7 wherein the externally generated [categories] tag names are alphanumeric names.

9. An electronic camera as claimed in claim 7 wherein the signal port also receives externally generated text strings for one or more of the [categories] tag names, and wherein the processor also stores the text strings in the memory with the [one or more categories] tag names.

10. An electronic camera as claimed in claim 7 wherein the signal port also receives externally generated graphics images for one or more of the [categories] tag names, and wherein the processor also stores the graphics images in the memory with the [one or more categories] tag names.

11. An electronic camera as claimed in claim 9 wherein the means for generating an [output image signal] image file overlays the text strings into the digital image data.

12. An electronic camera as claimed in claim 10 wherein the means for generating an [output image signal] image file overlays the graphics images into the digital image data.

13. An electronic camera as claimed in claim 1 wherein the memory stores a plurality of default [categories] tag names providing a default classification of the image by a set of codes, and wherein the camera further comprises a signal port for receiving externally generated [categories] tag names, the processor stores the externally generated [categories] tag names in the memory, and the [user] control means preferentially accesses the externally generated [categories] tag names when they are stored in the memory.

14. An electronic camera as claimed in claim 13 wherein the processor includes date and time information with the externally generated [categories] tag names.

15. An electronic imaging system using an electronic camera as claimed in claim 7 in combination with [a host processor] the external computer, wherein the [host processor] external computer provides the externally generated user customized [categories] tag names to the signal port.

16-25. Canceled

26. An electronic camera as claimed in claim 7 wherein the signal port connects to [a] the removable memory [card].

27. An electronic imaging system as claimed in claim 15 wherein the signal port connects to [a] the removable memory [card], and the [host processor] external computer provides the externally generated user customized tag names [categories] to the signal port by writing the [categories] tag names into the removable memory [card].

28. An electronic imaging system as claimed in claim 15 wherein [a cable connection] the cable interface is provided between the signal port and the [host processor] external computer, and the [host processor] external computer provides the externally generated user customized [categories] tag names over the cable interface to the signal port.

29. An electronic camera for capturing images representing a variety of subjects and for providing captured images to an external computer in response to a single computer initiated request, wherein the electronic camera is interconnected to the external computer via a cable interface, said camera comprising:

an image sensor for capturing the images;
a converter stage for converting the images into digital image data;
a memory for storing two or more tag names [a plurality of categories] providing classification of the images [by subject];

control means for selecting one of the stored tag names for each of the images;

a processor [having the capability of] for assigning the [plurality of categories] selected tag names to each of the images captured by the image sensor, wherein each [category] tag name [providing subject] provides classification of [one] two or more captured images;

[control means for selecting one or more categories for each the images;]

[a user control for selecting one or more categories for the images before the images are captured by the image sensor];

means for storing the digital image data in image files; [and]
means for [grouping] storing each of the image files [according to the plurality of categories] into a tag name file corresponding to the selected tag name, wherein two or more tag name files are stored and each tag name file stores two or more image files; and

means responsive to the computer initiated request for identifying a particular tag name for transferring all of the image files stored in the corresponding tag name file to the external computer via the cable interface.

30. A method using an electronic camera for capturing images representing a variety of subjects and for providing captured images to an external computer in response to a single computer initiated request, wherein the electronic camera is interconnected to the external computer via a cable interface, said method comprising the steps of:

storing [a plurality of categories] two or more tag names providing classification of the images [by subject];

selecting, by a user control, one of the stored tag names for each of the images;

assigning [at least one of the plurality of categories] the selected tag names to each of the images before the images are captured by the electronic camera, wherein each [category providing subject] tag name provides classification of [one] two or more images;

capturing the images with the electronic camera;

converting the images into digital image data; [and]

generating, by a camera processor, an [output image signal comprising an] image file including [both] the digital image data corresponding to the captured images and a separate tag name file for each selected tag name [separate category data including the one or more categories selected by a control,

wherein the category data is separately accessible for each image apart from the image data];

storing each of the image files into the tag name file corresponding to the selected tag name, wherein the camera stores two or more tag names files with each tag name file storing two or more image files; and
identifying, in response to a computer initiated request, a particular tag name and transferring all of the image files stored in the tag name file corresponding to the identified particular tag name to the external computer via the cable interface.

31. The electronic camera according to claim 1 wherein the control means is a user control.

32. Canceled

33. The electronic camera according to claim 29 wherein the control means is a user control.

34. Canceled

35. The electronic camera according to claim 1 wherein the [at least one particular category] tag name is selected on the computer.

36. The electronic camera according to claim 35 wherein the
[computer is interconnected to the electronic camera via a cable interface, and
wherein the plurality of categories] tag names are communicated from the
electronic camera to the computer via the cable interface, and the at least one
particular [category] tag name is selected on the computer and downloaded to the
electronic camera via the cable interface.

37. The electronic camera according to claim 29 wherein the [at
least one particular category] tag name is selected on the computer.

38. The electronic camera according to claim 37 wherein the
[computer is interconnected to the electronic camera via a cable interface, and
wherein the plurality of categories] tag names are communicated from the
electronic camera to the computer via the cable interface, and the at least one
particular [category] tag name is selected on the computer and downloaded to the
electronic camera via the cable interface.